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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/345,335	07/01/1999	STEPHANIE A. E. GUERLAIN	H16-25553	1129

128 7590 01/14/2004

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EXAMINER

TRAN, MYLINH T

ART UNIT	PAPER NUMBER
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2174

DATE MAILED: 01/14/2004

21

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application N .

09/345,335

Applicant(s)

STEPHANIE GUERLAIN

Examiner

Mylinh T Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Request for Recon filed 10/10/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-21,23-25 and 27-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-21,23-25 and 27-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Applicant's Request for Recon filed 10/10/03 has been entered and carefully considered. However, arguments regarding rejections under U.S.C 103 to claims (1, 3, 7-13, 15-21, 23-25, 27-33 and 35-51) have not been found to be persuasive. Therefore, these claims 1, 3, 7-13, 15-21, 23-25, 27-33 and 35-51 are rejected under the same ground of rejection as set forth in the Office Action mailed (07/08/03).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 7-13, 15-17, 19, 21, 23-25, 27-33, 35-38, 40-41 and 43-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michener et al. [US. 4,745,543] in view of Harrow et al. [US. 5,375,199].

As to claims 1, 3, 4, 21, 23, 24, 40, 43, 47 and 51, Michener et al. teaches a first pair of high and low limit elements representative of engineering hard high and low limit values (controlled variables) for the corresponding process variable (figure 2, (0-100), column 47-63) that define a range in which operator set high and low values are set (figure 2); a second pair of high and low limit elements representative of operator set high and low limit values elements (manipulated variables) (figure 2, (S3, S4), column 5, lines 56-65). The

engineering high and low limit values and the operator set high and low limit values are processed at same range (figure 2); further wherein each of the plurality of graphical devices is displayed in proximity to one of the manipulated and controlled variables (column 3, lines 45-63); and a graphical symbol representative of an optimization characteristic for the corresponding process variable (column 5, lines 47 through column 6, line 50). The difference between Michener et al. and the claim is a graphical user display, a gauge axis and a graphical shape displayed along the gauge axis. Harrow et al. teach the gauge axis and a graphical shape at figure 13A. It would have been obvious to one of ordinary skill in the art, having the teachings of Michener et al. and Harrow et al. before them at the time the invention was made to modify the engineering and operating limit values of taught by Michener et al. to include the graphical user interface display of Harrow et al., in order to allow the user to exploit their strengths in detecting and resolving process abnormalities as taught by Harrow et al.

As to claims 5 and 25, while Harrow shows the gauge axis representative of engineering and operating hard high and low limit values, Michener et al. teaches "operating high and low limit values are displayed at a shorter length than and between the first pair of parallel lines extending orthogonal to the engineering hard high and low limit values" (figure 2, operator can set S3 and S4 so that user low and high limit values would be inside the engineering high and low limits.

As to claims 7 and 27, while Harrow shows the gauge axis representative of engineering and operating hard high and low limit values along the gauge axis Michener et al. demonstrates the graphical shape is positioned adjacent one of the first or second pair of high and low limit elements when the value for the corresponding process variable is within a certain-range of the engineering hard high and low limit values or the operator set high and low limit values (figure 2). It is inherent that if the corresponding process variable is within a certain-range of the engineering high and low limit values then the graphical shape is positioned adjacent the first pair of high and low limit elements.

As to claims 8 and 28, In combination of Michener et al. and Harrow et al., they also demonstrates the graphical shape (Harrow, figure 13A) is positioned outside of the parallel lines of the second pair of high and low limit elements when the value for the corresponding process variable is outside the high and low process limit values by a predetermined percentage (figure 2, column 5, line 48 through column 6, line 50). In combination of Michener et al. and Harrow et al. (figure 13A), the graphical shape is positioned outside of the parallel lines when the value for the corresponding process variable is outside the high and low process limit values.

As to claims 9 and 29, while Harrow teaches a graphical symbol. Michener shows representative of an optimization characteristic for the corresponding process variable (column 3, lines 26-63).

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As to claims 10, 11, 30, 31, 44, 45, 48 and 49, Harrow et al. also shows the graphical user display of claim 9, Michener teaches the graphical symbol is representative of a corresponding process variable to be maximized and the graphical symbol is representative of a corresponding process variable to be maximized (figure 2, (100)).

As to claims 12, 32, 46 and 50, while Harrow et al. discloses the graphical symbol. Michener shows representative of a corresponding process variable which is to be held at a resting value (column 3, lines 48-63).

As to claims 13 and 33, Harrow et al. also discloses the at least one graphical device further includes a graphical symbol. Michener shows representative of the corresponding to process variable being constrained to set point (column 3, lines 48-63).

As to claims 15 and 35, although Harrow et al. discloses the rectangular graphical shape on the gauge axis (figure 13A), they do not explicitly mention about the "graphical shape is a circle positioned along the gauge axis".

However, it is well known in the state of the art that it is seen as an obvious design expedient for having circular shape. The Examiner takes Official Notice.

It would have been obvious to one of ordinary skill in the art, having the teachings of Harrow et al. before him, to modify the rectangular shape of Harrow et al. to be circle shape, as made known in the state of the art.

As to claims 16, Michener et al. demonstrates the graphical shape has a color of a set of colors that reflects the state of the current value for the corresponding process variables (column 4, lines 43-60).

As to claims 17 and 37, the claims are analyzed as previously discussed with respect to claim 1.

As to claims 19 and 41, Harrow et al. discloses a matrix display having the manipulated variables displayed along a first axis thereof and the controlled variables displayed along a second axis thereof, wherein each of the manipulated and controlled variables includes a graphical device displayed in proximity thereto (figure 11B, column 18, lines 16-32).

As to claim 36, Michener et al. also discloses determining a state of a current value for the corresponding process variable and displaying the graphical shape in a color of a set of colors that reflects the determined state for the corresponding variable (column 4, lines 50-60).

As to claim 38, Harrow et al. also demonstrates the process is a continuous multivariable process being performed at a process plant, wherein the continuous multivariable is operable under control of at least manipulated variables and controlled variables of the one or more process variables, and further wherein the method includes: displaying a matrix display having the manipulated variables displayed along a first axis thereof and the controlled variables displayed along a second axis thereof; and displaying a graphical

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device in proximity to each of the manipulated variables and controlled variables (column 5, lines 10-36 and column 6, lines 30-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18, 20, 39 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michener et al. [US. 4,745,543] in view of Harrow et al. [US. 5,375,199] and further in view of van Weele [US. 5,631,825].

As to claim 18, the difference between Michener et al. in view of Harrow et al. and the claim is the process is a continuous multivariable process being performed at a process plant. van Weele et al. teaches the process is a continuous multivariable process being performed at a process plant, wherein the continuous multivariable process is operable under control of at least manipulated variables and controllable variables of the one or more process variables (column 14, lines 11-26). It would have been obvious to one of ordinary skill in the art, having the teachings of Michener et al. and Harrow et al. before them at the time the invention was made to modify the gauge axis and the graphical shape and the user defining high and low limits of Michener and Harrow et al., to include the continuous multivariable process being performed at a process plant of van Weele et al., in order to provide data input means for

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selecting one of a set of preselected process primitives, and means for indicating a value for the selected process primitive and substituting the input value for that primitive as the value to be monitored and controlled by the PPC, as taught by van Weele et al.

As to claim 20, van Weele et al. demonstrates each graphical device displayed is selectable for navigation to more detailed information for process variable, corresponding to the selected graphical device, wherein the detail information is displayed on the same screen therewith (column 36, lines 12-19).

As to claim 39, van Weele shows receiving user input to select a displayed graph selected and graphical device, wherein the detailed information is displayed on the same screen with the graphical device (column 40, lines 65-67 and column 41, lines 1-11).

Allowable Subject Matter

Claims 14 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

These claims would be allowable because the prior arts fail to teach or suggest the graphical symbol representative of the corresponding process variable being wound up.

Response to Arguments

Regarding claim 1, 4, 21, 24, 40, 43, 47 and 51, Applicant has argued the references fail to teach "a first pair of high and low limit elements representative

of engineering hard high and low limit values for the corresponding process variable that define a range in which operator set high and low values are set and a second pair of high and low limit elements representative of the operator set high and low limit values for the corresponding process variable which define a range in which the process is free to operate, where the first and second pair of high and low limit elements are displayed on the gauge axis".

Applicant also argues "the references do not teach the limit value which is described in the specification as "As used herein, engineering physical limit values refer to limit values that define the physical limits of a piece of equipment or instrumentation. They represent the widest possible range of meaningful quantification of a process variable.

As used herein, engineering hard limit values are those limit values set by a user, particularly a control engineer, to establish a range over which an operator or another user can safely set operator set limit values.

As used herein, operator set limit values are limit values through which an operator exerts influence on the controller 14. Such limits establish the range in which the control solution is free to act when it is afforded sufficient degrees of freedom.

Lastly, as used herein, optimization soft limits, or otherwise referred to herein as delta soft bands, are pseudo limits describing an offset within the operator set limits that the optimization calculations will attempt to respect".

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However, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

Therefore, Michener et al. still teaches a first pair of high and low limit elements representative of engineering hard high and low limit values (controlled variables) for the corresponding process variable (figure 2, (0-100), column 47-63) that define a range in which operator set high and low values are set (figure 2); a second pair of high and low limit elements representative of operator set high and low limit values elements (manipulated variables) (figure 2, (S3, S4), column 5, lines 56-65); and Harrow et al. still teaches the gauge axis and a graphical shape at figure 13A.

Regarding claims 7 and 27, Applicant argues the prior arts fail to teach "the graphical shape positioned adjacent one of the pair of high and low limit elements when the value for the corresponding process variable is within a certain range of the engineering hard high/low limits. Applicant's attention is directed to figure 2 of Michener.

Regarding claims 8 and 28, Applicant's attention is directed to figure 13A of Harrow and figure 2, column 5, line 48 through column 6, line 50 of Michener et al.

Regarding claims 10, 11, 30, 31, 44, 45, 48 and 49, Applicant's attention is directed to figure 2, (100) of Michener which is "Value (100) is the maximum value at the graphical".

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Regarding claims 12, 32, 46 and 50, Applicant's attention is directed to column 3, lines 48-63) for representative of a corresponding process variable which is to be held at a resting value.

Regarding claims 13 and 23, Applicant's attention is directed to column 3, lines 48-63 for the process variable being constrained to set point.

Regarding claims 15 and 35, Applicant traverses the Official Notice to assert that "use of a circle positioned along the gauge axis is obvious". Applicant's attention is directed to the system of Schaefer et al. [US. 4,675,147]. Schaefer et al. teaches "graphical shape is a circle positioned along the gauge axis" at figure 6) with the motivation being "intended used" for the designer.

Regarding claims 19 and 41, Applicant's attention is directed to figure 11B, column 18, lines 16-32 of Harrow et al. for a matrix display having the manipulated variables displayed along a first axis thereof and the controlled variables displayed along a second axis thereof, wherein each of the manipulated and controlled variables includes a graphical device displayed in proximity thereto.

Regarding claim 36, Applicant's attention is directed to column 4, lines 50-60 for determining a state of a current value for the corresponding process variable and displaying the graphical shape in a color of a set of colors that reflects the determined state for the corresponding variable.

Regarding claim 38, Applicant's attention is directed to column 5, lines 10-36 and column 6, lines 30-65 for the process being a continuous multivariable

process being performed at a process plant, wherein the continuous multivariable is operable under control of at least manipulated variables and controlled variables of the one or more process variables, and further wherein the method includes: displaying a matrix display having the manipulated variables displayed along a first axis thereof and the controlled variables displayed along a second axis thereof; and displaying a graphical device in proximity to each of the manipulated variables and controlled variables

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion

Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231. If applicant desires fax a response,

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(703) 746-7238), may be used for formal After Final communications, (703) 746-7239 for Official communications, or (703) 746-4395 for Non-Official or draft communications. NOTE, A Request for Continuation (Rule 60 or 62) cannot be faxed.

Please label "PROPOSED" or "DRAFT" for information facsimile communications. For after final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mylinh Tran whose telephone number is (703) 308-1304. The examiner can normally be reached on Monday-Thursday from 8.00AM to 6.30PM

If attempt to reach the examiner by telephone are unsuccessful, the examiner 's supervisor, Kristine Kincaid, can be reached on (703) 308-0640,

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Mylinh Tran

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Kristine Kincaid
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